

### ACTIVITY 1.3 WHICH PRICE IS RIGHT?

#### Warm Up

You and a partner own a janitorial service. Your janitorial service buys cleaning products for the office buildings that you clean. Before making your purchases, you research prices from local stores or online stores to calculate and compare the unit price of each item. You could record your research on a table similar to the following sample.

For each item shown in the table, compare the cost per unit of two different package sizes.

Record which size has the lower cost per unit.

Comparing Different Sizes						
Item	Smaller Size	Price	Unit Price	Larger Size	Price	Unit Price
Light Bulbs	3	\$2.49		6	\$4.49	
Paper Towel	3	\$3.69		6	\$6.49	
Garbage Bags	20	\$8.79		30	\$9.99	
Sponges	5	\$7.95		8	\$12.99	

## EXPLORE THE MATH

The price at which goods and services are sold has an impact on you whether you are a consumer or working in a business. Prices rise and fall due to consumer demand and supply. If demand rises, suppliers are able to charge more. If demand falls, or if there is a large supply of a product, prices may fall.

Prices also rise and fall according to the cost of the materials and labour that go into the creation of a product or service. An additional amount, called markup, is added to these costs so that a profit can be made. For example, when the owner of a retail store buys items to re-sell, he or she buys them at a wholesale price. This price is then marked up and the item is sold at a higher retail price. The markup is usually a percent of the wholesale price.

When setting the prices for goods and services, companies consider psychological factors that have an impact on buyers as well as the cost of their products.

Have you ever wondered why something costs \$39.95 instead of \$40.00? If you sell something in your store for \$39.95 rather than \$40.00, the difference in price, though small, can have a big impact on sales because the item seems less expensive.

If you are a butcher, you may advertise a price of \$2.39/100 g of meat, because that seems less expensive to consumers than \$23.90/kg, even though these prices are equivalent.

## 1.3

### Setting a Price

**markup:** the difference between the amount a dealer sells a product for and the amount he or she paid for it.

**percent:** percent means “out of 100”; a percentage is a ratio in which the denominator is 100.

Remember that in many cases taxes are added to arrive at the total price. Taxes are calculated as a percentage of the price paid. All Canadians pay the federal Goods and Services Tax (GST), which was 5% at the time of publication (2011). Most of the provinces also charge Provincial Sales Tax (PST).

Three of the four Atlantic provinces add the two taxes together and charge a Harmonized Sales Tax (HST). The taxes for each Atlantic province are shown in the table below.

You will need this table when calculating taxes from now on.

**FIGURE 1.1**  
**PST, GST, and HST in Atlantic Provinces**

	<i>GST</i>	<i>PST</i>	<i>HST</i>
Nova Scotia			15%
New Brunswick			13%
Newfoundland and Labrador			13%
Prince Edward Island	5%	10%	

## Calculating Percentages

1 )  $22\% \times 70 = \underline{\hspace{2cm}}$

2 )  $18\% \times 67 = \underline{\hspace{2cm}}$

3 )  $59\% \times 39 = \underline{\hspace{2cm}}$

4 )  $20\% \times 71 = \underline{\hspace{2cm}}$

5 )  $9\% \times 56 = \underline{\hspace{2cm}}$

6 )  $13\% \times 55 = \underline{\hspace{2cm}}$

### HINTS

1. To change a number written as a percent to a fraction, write the number over 100.
2. To change a fraction to a decimal, divide the denominator into the numerator.
3. Since a percentage is a fraction over 100, you can convert it to a decimal by dividing the percentage by 100.

### Example 1

Arlene purchases fabric at a wholesale price for her custom sewing business in Cavendish, PEI. She pays \$46.00/m. She charges a markup of 20% on the fabric.

What will Arlene charge her clients per metre?

### Example 2

A sports store in Fredericton, NB, is selling a Easton Stealth 85S II Grip Senior Composite Hockey Stick. The list price for the stick is \$219.00. What will the total cost be, including HST?



### Example 3

A furniture store in Charlottetown, PEI, is selling a bedroom suite. The list price for the suite is \$1599.00.

What will the total cost be, including GST and PST?



To Do:

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